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JP/jmr
7-2-59

SHINDEL'MAN, R.I., inzh.

Letter to the editors, Gor. zhur. no.2:80 7 '58.
(Shaft sinking)

(MIRA 11:3)

SHINDEL'MAN, R.I.

Powerful electrolyzer converters. Biol. TSIM tsvet. no. 6:29-
34 '58. (MIRA 11:7)

(Aluminum--Electrometallurgy)
(Electrolysis)

BUGAREV, L.A.; ZHHELEZNOV, A.I.; SHINDEL'MAN, R.I.

Improving the process of aluminum electrolysis. TSvet. met. 31
no. 4:49-52 Ap '58. (MIHA 11:5)

1. Gosudarstvennyy nauchno-tekhnicheskii Komitet Soveta Ministrov
RSFSR.

(Aluminum—Electrometallurgy)

SHINDEL'MAN, R.I.

Greater use of compensating equipment. TSvet. met. 34 no.2:83-84
F '61. (MIRA 14:6)

(Nonferrous metals—Electrometallurgy)

SHINDEL'MAN, R.I.

Increasing the power factor in electrometallurgical and electro-
chemical enterprises by means of switching devices. TSvet. met.
34 no.5:29-36 My '61. (MIRA 14:5)
(Electrometallurgy) (Electric switchgear)

SHINDEL'MAN, R.I.

Increasing the power factor in electrometallurgical and electro-
chemical enterprises by means of switching devices. TSvet. met.
34 no.5:29-36 My '61. (MIRA 14:5)
(Electrometallurgy) (Electric switchgear)

VAL'SHONOK, O.S.; SHINDEL'MAN, R.Ya.

Reflex vegetative syndromes in the late period of lesions
of the peripheral nervous system. Zhur. nevr. i psikh.
62 no.2:259-265 '62. (MIRA 15:6)

1. Otdel vegetativnoy patologii (zav. - doktor meditsinskih
nauk O.S. Val'shonok) Ukrainskogo nauchno-issledovatel'skogo
psikhonevrologicheskogo instituta (dir. - starshiy nauchnyy
sotrudnik P.I. Kovalenko) i Khar'kovskaya psikhonevrologicheskaya
bol'nitsa (glavnyy vrach - kand.med.nauk O.R. Stepanenko).

(NERVES, PERIPHERAL--DISEASES)
(NERVOUS SYSTEM, AUTONOMIC--DISEASES)

PA 64/49T99

USSR/Medicine - Central Nervous System May/Jun 49
Medicine - Neurosurgery

"Problem of the Pathogenesis of Structural Changes in the Central Nervous System Caused by Isolating the Boundary of the Sympathetic Nervous System in the Cervical Region," R. Ya. Shindel'man, Cand Med Sci, Lab of Physiol Anat, Khar'kov, 5 pp

"Vop Neurohirurg" No 3

Historical observation of the brain of dogs subjected to prolonged intoxication with small doses of adrenalin revealed that changes in diffusion of ganglia of the central nervous system were more pronounced in the cortex and cerebellum. Noted 64/49T99

USSR/Medicine - Central Nervous System May/Jun 49
(contd)

Four types of changes: edema, sclerosis, vacuolation, and morbid degeneration of the ganglia. Observed these changes were similar to those in the central nervous system of animals 3-5 months after the isolation of the boundary of the sympathetic nervous system in the cervical region, with the exception that the quantity of sclerous and vacuolated cells was greater and less edematous cells in the latter animals. Submitted 13 Jul 48.

64/49T99

SHINDEL'MAN, R. YA.

SHINDEL'MAN, R.Ya.; STEPANENKO, O.R.

Symptomatology of lesions of the marginal trunk of the
sympathetic nervous system. Zhur. nevr. i psikh. 65 no.9:
1305-1311 '65. (MIRA 18:9)

1. Otdel vegetativnoy patologii (zaveduyushchiy - prof. O.S.
Val'shonok) Ukrainskogo nauchno-issledovatel'skogo psikh-
nevrologicheskogo instituta (direktor O.R. Stepanenko), Khar'kov.

VOYTENKO, N.: SHINDEL'MAN, Ye.

Make wider use of advanced methods. Obshchestv. pit. no. 4:1-4
Ap '58. (MIRA 11:4)

1. Upravlyayushchiy respublikanskoy kontoroy "Ukrobshchepit" (for
Voytenko). 2. Nachal'nik proizvodstvennogo otdela "Ukrobshchepit"
(for Shindel'man).
(Restaurants, lunchrooms, etc.)

SHINDEL'MAN, Ye.

Semiprocessed products for railroad dining cars. Obshchestv.
pit. no.11:40-41 N '59. (MIRA 13:3)

1. Nachal'nik trgovno-proizvodstvennogo otdela Ukrdorrestorana
Ministerstva trgovli USSR.
(Ukraine--Railroads--Dining car service)

SHINDER, A.L.

Economical lung resection in tuberculosis. Zdravookhranenie 3
no.1:25-28 Ja-F '60. (MIRA 13:6)

1. Iz Moldavskogo nauchno-issledovatel'skogo instituta tuber-
kuloza (direktor V.G. Sokol).
(LUNGS--SURGERY) (TUBERCULOSIS)

DRAGANYUK, K.A.; MARGULIS, V.E.; SHINDER, A.L.

Late results of thoracoplasty. Zdravookhranenie 4 no.3:31-33
My-Jar 61. (MIRA 16:7)

1. Iz Moldavskogo nauchno-issledovatel'skogo instituta tuberku-
leza (direktor kand.med. nauk V.G.Sokol) i Moldavskogo respub-
likanskogo tuberkuleznogo sanatoriya "Vernichen" (glavnyy vrach
K.A.Draganyuk).

(CHEST--SURGERY)

SHINDER, N.L.

Hermetic closure of the extrapleural cavity in extrapleural pneumonolysis. Probl. tub. no.3:56-57 My-Je '54. (MLRA 7:11)

1. Iz Moldavskogo respublikanskogo tuberkuleznogo sanatoriya (Vornicheny) glavnyy vrach B.G.Volynets) i Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach M.O.Zagarskikh)

(COLLAPSE THERAPY,

pneumonolysis, extrapleural, hermetic closing of extrapleural cavity)

CHENBER, N. D.

"The role of local anesthesia in burning pleural adhesions in patients with pulmonary tuberculosis." Min Health Moldavian SSR. Kishinev State Medical Inst. Kishinev, 1956. (Dissertations for the Degree of Candidate in Medical Science)

So:Krizhaya leto:is', No. 10, 1956

SHINDER, N.L.

Experience in the use of Bobrov's apparatus for novocaine local
anesthesia in thoracic surgery. Khirurgia 32 no.3:83 Mr '56.
(MIRA 9:7)

1. Iz Moldavskogo raspublikanskogo tuberkuleznogo sanatoriya
"Vornicheny" glavnyy vrach B.G.Volynets) i respublikanskoy klini-
cheskoy bol'nitsy (glavnyy vrach M.G.Zagorskikh)
(LOCAL ANESTHESIA) (NOVOCAINE)
(CHEST--SURGERY)

SHINDER, N.L.

Expediency of anesthesia in cautery of pleural adhesions. Probl.
tub. 34 no.3:52-54 My-Je '56. (MLBA 9:11)

1. Iz gosspital'noy khirurgicheskoy kliniki (zav. - prof. I.V.Ruzhov)
Kishenevskogo meditsinskogo instituta na baze Respublikanskoy klini-
cheskoy bol'nitsy (glavnyy vrach M.G.Zagarskiy)

(COLLAPSE THERAPY
thoracocautery, anesthesia)

(ANESTHESIA
in thoracocautery)

SHINDER, N.L., kand.med.nauk; BALABAN, M.B.

Diagnosis of bronchoesophageal fistula. Vest.rent. 1 rad. 33 no.2:
(MIRA 11:6)
75-76 Mr-Apr '58.

1. Iz gosptal'noy khirurgicheskoy kliniki (zav. - prof. P.V.
Ryzhov) i rentgenovskogo otdeleniya Respublikanskoy klinicheskoy
bol'nitsy v Kishineve (glavnyy vrach N.A.Testemitsanu)
(BRONCHI, fistula
bronchoesophageal, x-ray diag. (Rus))
(ESOPHAGUS, fistula
same)

SHINDER, N.L., kand.med.nauk

Resection of the lung in tuberculosis in sanatoria. Probl.tub. 37
no.7:50-52 '59. (MIRA 13:4)

1. Iz Moldavskogo respublikanskogo sanatoriya "Vornicheny" (nauchnyy
rukovoditel' - prof. P.V. Ryzhov).
(PNEUMONECTOMY)

SHINDERMAN, M.

New stomatological polyclinic in Beltsy. Stomatologiya 40 no.1:91-
92 Ja-F '61. (MIRA 14:5)

1. Glavnyy vrach rayonnoy stomatologicheskoy polikliniki v Bel'tsakh
(Moldavskaya SSR). (BELTSY—STOMATOLOGY)

LEVIN, Mikhail Isaakovich; SHINDEROV, B.Ya., otv. red.; BELINA, R.A.,
red. izd-va; ANDREYEV, S.P., tekhn. red.

[Equipment and design of shops for reprocessing scrap metal]
Oborudovanie i proektirovanie tsekhov po pererabotke loma.
Khar'kov, Metallurgizdat, 1962. 210 p. (MIRA 16:2)
(Scrap metals)

YAKUSHIN, V.A., inzh.; SHINDEROV, F.N., inzh.

Losses of tension in the bending of rod reinforcement on long-line
stretching beds. Bet. 1 zhel.-bet. 8 no.2:62-65 F '62.
(MIRA 16:5)
(Concrete reinforcement)

BESKOV, V.S.; LIBERZON, L.M.; SLIN'KO, M.G.; Prinimali uchastiye. AKIMUTIN,
N.M. BURYAK, K.A.; SHINDEROVA, T.A.

Determining the static characteristics of a contact apparatus for
the oxidation of sulfur dioxide in order to achieve the optimiza-
tion of the process. Khim. prom. 40 no.9:678-680 S '64. (MIRA 17:11)

1. Institut kataliza Sibirskogo otdeleniya AN SSSR (for Akimutin).
2. Nauchnyy institut udobreniy i insektofungitsidov imeni professora
Ya.V. Samoylova, (for Shinderova).

DREVAL', N.V., inzh.; LIBTSIS, S.Ye., inzh.; VASERNIS, A.I.,
inzh.; SHINDNES, R.M., inzh.; KOSOROTOV, B.V., red.

[Construction and operation of the T-16 automotive chassis]
Ustroistvo i ekspluatatsiia samokhodnogo shassi T-16. Mo-
skva, Kolos, 1965. 190 p. (MIRA 18:7)

1. Khar'kovskiy traktorosbornochnyy zavod (for all except
Kosorotov).

CHERNENKO, M.I.; YAKOVENKO, L.T.; RECHETNYAK, K.K.; SHINDIKOVSAIY, V.I.

Antierthrocytic antibodies and their significance in autoaggressive diseases of the blood system and other systems of the body. Gemat. i perel. krovi 1:228-230 '65.

(MIRA 18:10)

1. Khar'kovskiy Institut perelivaniya krovi.

SHINDIN, A.N.

Effect of radial clearances on the power parameters and the
balance of energy of a turbodrill turbine. Neft. khoz. 39
no.5:12-16 May '61. (MIRA 14:9)
(Turbodrills)

SHINDIN, A.N.

Degree of reaction and tip-leakage flow of a radial flow turbine. Neft. khoz. 40 no.7:11-15 J1 '62. (MIRA 17:3)

SAFONOV, A.; SHINDIN, F.; BUKOV, F.; KRACHINA, V.; KUZIN, A.;
SAVENKOV, A.

Preparing for the transition to a seven-hour workday. Dan.1
kred. 18 no.5:64-69 My '60. (MIRA 13:5)

1. Glavnyy bukhgalter Gorlovskogo otdeleniya Gosbanka Stalinskoy oblasti (for Safonov). 2. Glavnyy bukhgalter Stalinskogo otdeleniya Gosbanka (for Shindin). 3. Starshiy kassir Stalinskogo otdeleniya Gosbanka (for Bukov). 4. Glavnyy bukhgalter Baranovicheskogo otdeleniya Gosbanka (for Krachina). 5. Zamestitel' upravlyayushchego Andizhanskoy oblastnoy kontoroy Gosbanka (for Kuzin). 6. Starshiy inspektor Andizhanskoy oblastnoy kontoroy Gosbanka (for Savenkov).

(Hours of labor) (Banks and banking)

ZYAPAROV, R.; SVIRIDOV, K.; SHINDIN, F.; OSIPOV, G.

For the further improvement of bank work. Den. i kred. 18 no.10:
50-56 O '60. (MIRA 13:10)

1. Glavnyy bukhgalter Semipalatinskoy kontory Gosbanka (for Zyaparov).
2. Glavnyy bukhgalter Voronezhskoy kontory Gosbanka (for Sviridov).
3. Glavnyy bukhgalter Stalinskogo otdeleniya Gosbanka g.Chelyabinska (for Shindin).
4. Glavnyy bukhgalter Irkutskoy kontory Gosbanka (for Osipov).

(Banks and banking)

MAKRUSHIN, P.V., dotsent; SHINDIN, S.M., dotsent;
MAKRUSHINA, L.A., laborant

Effect of fodder phosphatides on the growth and development of
chickens. Trudy SZVI 11:87-95 '62. (MIRA 16:7)

(Phosphatides)
(Poultry--Feeds and feeding)

SHINDIN, S.M., dotsent

Morphology of the synapses in the junctions of vegetative
plexuses in the light of new data of electron microscopy.
Trudy SZVI 11:217-226 '62. (MIRA 16:7)

(NERVOUS SYSTEM, AUTONOMIC)
(ELECTRON MICROSCOPY)

SHINDIN, S.M. dotsent

Presence of unipolar neurons in the junctions of vegetative
nerve plexuses. Trudy SZVI 11:227-229 '62.

(MIRA 16:7)

(NERVOUS SYSTEM, AUTONOMIC)

UVAROVA, T.V.; SHINDINA, Z.I.

Improving the processing of spices. Kons. i ev. prem. 13
no.12:12-14 D '58. (MIRA 11:12)

1. Moskovskiy pishchevyy kombinat imeni Mikeyana.
(Spices) (Canning industry--Equipment and supplies)

SHINDLER, M.S. (Kremenchug)

Use of intermittent stimulation of the cortical processes in treating
epilepsy. Vrach. delo no.1:148-149 Ja '62. (MIRA 15:2)
(EPILEPSY)

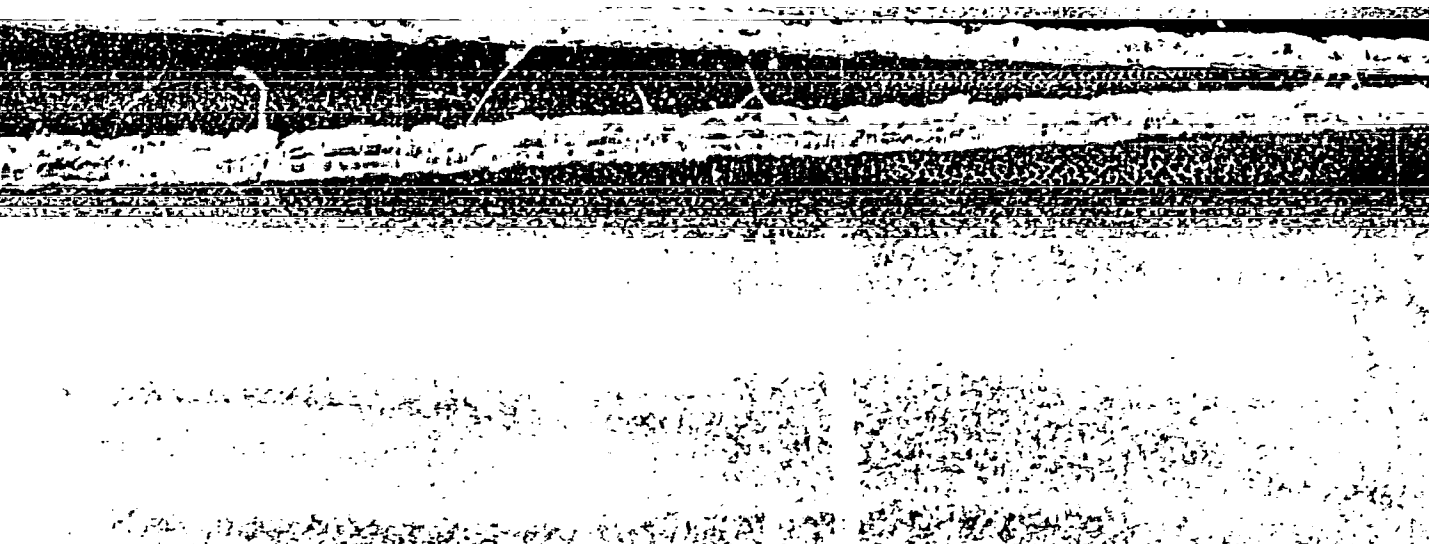
SHINDLER, S.

"At the beginning of a new year." p. 17. (HAFTA. Vol. 11, No. 1, Jan. 1955.
Krakow, Poland)

SO: Monthly List of East European Accessions. (EEAL). LC. Vol. 4, No. 4.
April 1955. Uncl.

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APPROVED FOR RELEASE: 08/23/2000

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SHINDLER, V., prepodavatel' obshchestvovedeniya

Museum of combat glory in a school. Prof.-exam. work. 1965. (MIRA 1965)

1. Shindler V. Obshchestvovedeniye. Shkolishche No.25, Minsk.

L 44337-66 FWT(d)/FWT(m)/FWP(h)

ACC NR: AN6012087 (✓) SOURCE CODE: UR/9008/66/000/099/0002/0002

AUTHOR: Yefimov, A. (Lieutenant general, Twice hero of the Soviet Union, Military pilot first class); Shindler, V. (Colonel, Military navigator first class)

ORG: none

TITLE: You are taken off the active list? Then you shall be an aircraft controller

SOURCE: Krasnaya zvezda, 28 Apr 66, p. 2, col. 1-3

TOPIC TAGS: airforce personnel, aircraft, fighter aircraft, airborne radar

ABSTRACT: *Enormous flying speeds have proportionately increased the space covered during air combat. A pilot must therefore be always ready to assume the initiative in combat, but because a modern airplane is a collective instrument he cannot fulfill his assignment alone. From takeoff to the instant the target is sighted on the airborne radar screen, the skill and training of the aircraft controller are of primary importance, because he must indicate to the pilot the course, the speed, and the altitude, and remain informed on flight conditions and the intentions of the enemy. Perfect and flexible guidance of a fighter plane approaching the target is essential. The aircraft controller must therefore be both a specialist and a tactician.*

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ACC NR: AN6012087

While the pilot guesses the moves of the enemy from the data shown on his instrument panel, the aircraft controller watches for developments and corrects the instruments. After the target is sighted and the attack has begun, he carefully follows the moves of the target and is always ready to assist the pilot. Guidance by study of the radar screen must not be neglected. An officer aircraft controller simultaneously guiding two interceptors to two different targets happened to overlook the turning of a plane. Receiving no order, the pilot of the plane slowed down and missed his target. If the aircraft controller had consulted his instruments, this would not have happened. Although aircraft controllers are often the best guides for fighter planes in combat, they are, as a rule, selected from among pilots "taken off the active list" for reasons of health. The aircraft controller must learn the dynamics of interceptor flight, but this is far different from tactical flight control and guidance with the assistance of a radar screen, a plotting board and other special equipment. Because technological equipment has been replaced to a considerable extent, aircraft controllers need a solid theoretical and technical background. But command points are all on permanent duty and are widely scattered, and, men cannot assemble easily. The system of selection of aircraft controllers should be improved and organization of their training should be centralized. At present good

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L 44387-66

ACC NR: AN6012087

aircraft controller courses are few. The system in which two days of rest follow one day of duty is not efficient. Training with the use of combat aircraft leads to premature deterioration of costly equipment. A special, commercially built plane should be used to train aircraft controllers. [GC]

SUB CODE: 05, 15/ SUBM DATE: none

Card 3/3 *egh*

ZHODZISHSKIY, I.L., kandidat tekhnicheskikh nauk; ~~SHINDNES, M.M.~~,
inzhener.

Roofs made of slabs and girders. Bat. 1 shel. -bet. no.8:
296-300 Ag '56. (MLRA 9:10)

(Roofs) (Concrete slabs)

SHINDNES, M.M., inzh.

Standardization of the elements of gas piping. Prom. stroi.
40 [i.e. 41], no.5:46-47 My '63. (MIRA 16:5)
(Gas pipes--Standards)

SHINDRABOV, L.; MANOLOVA, N.

Interepidemic influenza according to data of the Institute of
Epidemiology and Microbiology of the Republic. *Suvrem. med.*,
Sofia 5 no.4:27-34 1954.

1. Iz Republikanskia institut po epidemiologia i mikrobiologia,
Sofia.

(INFLUENZA, epidemiology,
Bulgaria)

SHINDRYAYEV, I.A.

The operator is the central figure in the industry. Neft.khoz.
no.6:87-89 D '55. (MIRA 9:2)

1.Operator Syzranskego promysla ob'yedineniya Kuybyshevneft'.
(Petroleum workers)

— Shindryayev, I. A.

AID P - 3976

Subject : USSR/Mining

Card 1/1 Pub. 78 - 21/27

Author : Shindryayev, I. A., Oil Well Manager of the Syzran'
United Oil-Mining Kuybyshevneft'

Title : The oil well manager - the Central figure in the oil-
mining trade.

Periodical : Neft. khoz., v. 33, #12, 87-89, D 1955

Abstract : On the basis of past experience, the author emphasizes
the importance of the position of the oil well manager
who is primary responsible for efficient oil recovery,
well operation and equipment maintenance. He criticizes
unnecessary administrative bureaucracy and advocates
delegating more executive power and responsibility to
the well manager.

Institution : None

Submitted : No date

SHINDYALOV, N.A., kand. tekhn. nauk

[Socialist construction in Amur Province in 1922-1926;
author's abstract of a dissertation for the degree of
Candidate of Historical Sciences] Sotsialisticheskoe
stroitel'stvo na Amure v 1922-1926 gg.; avtoreferat dis-
sertatsii na soiskanie uchenoi stepeni kandidata istori-
cheskikh nauk. Moskva, Mosk. gos. pedagog. in-t, 1963.
20 p. (MIRA 18:5)

1. MANAFOV, I. I. - SHINDYAN, A. G.
2. USSR (600)
4. Azerbaijan - Agriculture
7. Decisively improve work on introducing scientific achievements and progressive practice into collective farm productions. Dost.sel'khoz. no. 11, 1952
9. Monthly List of Russian Accessions, Library of Congress, March 1953, Unclassified.

ACCESSION NR: AP4034268

S/0207/64/000/002/0022/0028

AUTHOR: Shindyapin, G. P. (Saratov)

TITLE: On the irregular reflection of weak shock waves from a solid wall

SOURCE: Zhurnal prikladnoy mekhaniki i tekhnicheskoy fiziki, no. 2, 1964, 22-28

TOPIC TAGS: irregular reflection, weak wave, infinite shock wave, motion equation, shock front, Hugoniot condition, velocity component, velocity field, Mach wave front

ABSTRACT: The irregular reflection of a weak wave according to the theory of "short waves" has been studied analytically. The front of a plane infinite shock wave AK (see Fig. 1 of the Enclosure) with small excess pressure p_1 is incident on a solid wall or at some angle α leading to a triple discontinuity. The "short-wave" theory equations of motion are written in nondimensional cylindrical coordinates for the region OABD and the boundary conditions satisfied at the shock front (Hugoniot conditions are satisfied automatically at the shock). The flow near the triple point A is determined under the conditions

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ACCESSION NR: AP4034268.

$$\begin{array}{lll} M_1 = p_1 / P_0 n, & \mu_1 \psi^* + v_1 = 0 & \text{on } AK \\ M = p / P_0 n, & \mu \psi^* - v = \mu_1 (a_0 + v + \psi^*) & \text{on } AB \\ M = p / P_0 n, & \mu \psi^* + v = 0 & \text{on } OA \end{array}$$

leading to

$$a_0 = (1 - \mu_1) / \sqrt{\mu_1}, \quad \chi_0 = \beta_0 = (2\mu_1 - 1) / \sqrt{\mu_1}.$$

Nondimensional coordinates have been used for the velocity components u and v , or

$$\begin{array}{ll} u = a_0 M_1 \mu = a_0 M, & v = a_0 \sqrt{1/2(n+1)} V_0 v = a_0 V \\ a = a_0 [1 + 1/2(n-1) M_0 \alpha], & a_0 = \sqrt{n P_0 / \rho_0} \end{array}$$

A set of three exact solutions is presented in the form

$$\mu = \varphi_2(q) Y^2 + \varphi_1(q), \quad \delta = q Y^2 + \chi_1(q), \quad v = \psi_2(q) Y^2 + \psi_1(q) Y,$$

and numerical solutions are obtained for the case of $M_1 = 0.1$, $\alpha = 4$, $\mu_1 = 0.833$.

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ACCESSION NR: AP4034268

A map of the reflecting waves is constructed by representing graphically the velocity field $\mu(X,Y)$ and the Mach wave front. "The author expresses his gratitude to S. V. Fal'kovich for his advice while evaluating the work." Orig. art. has: 6 figures and 42 formulas.

ASSOCIATION: none

SUBMITTED: 05Oct63

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SUB CODE: ME

NO REF SOV: 004

OTHER: 003

Card 3/4

L 14903-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(h)/EWA (c) WW/GS

ACC NR: AT6001786

SOURCE CODE: UR/0000/64/000/000/0101/0112

AUTHOR: Shindyapin, G. P.

ORG: Saratov State University (Saratovskiy gosudarstvennyy universitet)

TITLE: On the ordinary reflection of weak shock waves ^{44, 1, 55}

SOURCE: Transzvukovyye techeniya gaza (Transonic gas flows); sbornik statey. Saratov, Izd-vo Saratovskogo univ., 1964, 101-112

TOPIC TAGS: shock wave, shock wave reflection, gas dynamics, isentropic flow, Mach number *flow field, weak shock wave*

ABSTRACT: The flow field associated with the reflection of weak shocks is analyzed using a particular solution to the nonlinear system of short wave approximations. The compression is assumed to be isentropic, and for small overpressures one has

$$\frac{p}{p_0} = 1 + \frac{p}{p_0} - \frac{n-1}{2} \left(\frac{p}{p_0} \right)^2, \quad a = a_0 \left[1 + \frac{n-1}{2} \frac{p}{p_0} \right]$$

The steady state equations are given by

$$(\mu - \delta) \frac{\partial u}{\partial x} + \frac{1}{2} \frac{\partial v}{\partial y} + k p = 0,$$

$$\frac{\partial v}{\partial x} - \frac{\partial p}{\partial y} = 0, \quad M = \frac{p}{p_0}$$

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ACC NR: AT6001786

where

$$\alpha = \frac{1}{M_0} \frac{p}{p_0}, \quad \beta = \frac{M}{M_0}, \quad \text{r. e.} \quad M = \frac{p}{p_0} \frac{1}{\beta}$$

and the flow field is shown in Fig. 1.

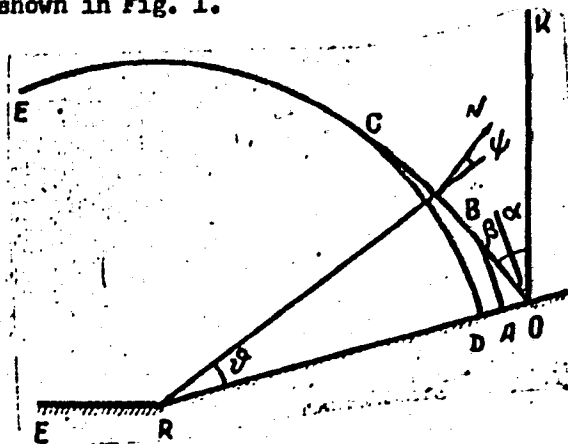


Fig. 1.

The equation of the reflected front OC is calculated to be

$$L = \frac{n+1}{4} (M + M_0) + \frac{1}{2} \theta^2$$

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ACC NR: AT6001786

and the conditions on the wall DA are given by $v = 0$ and $\psi = 0$. The pressure and the Mach number are calculated first in the region AOB, followed by the angle of the reflected wave from the vertical, β . For $a > a^*$, the particular solution to the above flow equations is written in the form

$$\mu = F(\xi), \xi = \delta - cY^2,$$

where

$$F'^2 + F'' - (\delta - 2c^2Y^2)F'' + (k - 1 - c)F' = 0.$$

$$F'' = 0, F = a\xi + a_1.$$

$$F' = 1 + c - k, c = a + k - 1, k = 1/2.$$

$$\mu = a\delta - a(a - 0.5)Y^2 + a_1.$$

Numerical results are obtained for several special cases. It is shown that a continuous map of the change in pressure can be obtained as a function of the angle of shock incidence close to the critical. Orig. art. has: 42 equations and 3 figures.

SUB CODE: 20/ SUBM DATE: 21Jul64/ ORIG REF: 007/

OTH REF: 004

PC
Card 3/3

shock waves," *PMM*, 1958, no. 24, no. 57. In the present paper, the method of expansion of the desired function

satisfy the solutions of the equations

Eq. 1.2

2.1.5.4-5

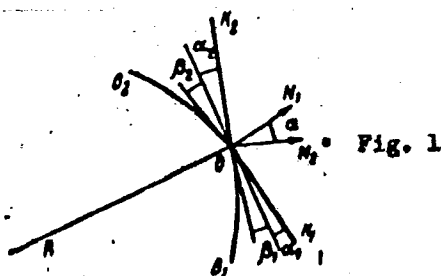
shock wave and find the coordinates of the front in closed form. The
the complete picture of the reflection and velocity field

given of the shock wave. Therefore the author thanks S. V. Falkovich for his val-

L 9230-66 EWT(1)/EWP(m)/EWA(d)/FCS(k)/EWA(h)/EWA(c) WW
ACC NR: AP6000552 SOURCE CODE: UR/0040/65/029/006/1128/1131
AUTHOR: ^{55 41}Shindyapin, G. P. (Saratov) 65
ORG: none 62
TITLE: On regular interaction domain of weak shock waves B
SOURCE: Prikladnaya matematika i mekhanika, v. 29, no. 6, 1965, 1128-1131
TOPIC TAGS: shock wave, gas dynamics, ^{1, 55, 44}weak shock wave, reflected shock wave,
Mach number
ABSTRACT: The theory of short waves is used to consider the domain of regular
interaction between weak shock waves. The collision of two such plane waves OK_1 ,
 OK_2 is shown in Fig. 1 with over-pressures p_1 and p_2 , intersecting each other at
small angle α . This intersection point is described by the trajectory RO . To
investigate the flow in the vicinity of the point O the theory of short waves is
used with the following nondimensional parameters
Card1/3 2

L 9230-66

ACC NR: AP6000552



$$\mu = \frac{M}{M_0} = \frac{1}{M_0} \frac{u}{a_0}, \quad v = \frac{1}{M_0 \sqrt{1/2(n+1)M_0}} \frac{v}{a_0}$$

$$\delta = \frac{1}{1/2(n+1)M_0} \left(\frac{r}{a_0} - 1 \right), \quad Y = \frac{\phi}{\sqrt{1/2(n+1)M_0}}, \quad \tau = \ln t, \quad M = \frac{P}{\pi P_0}.$$

In the vicinity of 0 the analysis yields the following cubic equation

with coefficients as functions of M_1 and M_2 . The solution of this equation is obtained numerically which at $\eta=1$ gives

L 9230-66

ACC NR: AP6000552

$$a^* = \left[\frac{2(5\eta^2 + 6\eta + 5)}{(\eta + 1)} \right]^{1/2}$$

where

$$a^* = \frac{a}{\sqrt{1/2(n+1)M_1}}$$

The various results are given graphically. The author thanks S. V. Fal'kovich for his advice in evaluating the work. Orig. art. has: 24 equations and 5 figures.

SUB CODE: 20/

SUBM DATE: 12Jul65/

ORIG REF: 003

Card 3/3

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549510017-8

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549510017-8"

TIMOFEYEV, Vladimir Petrovich; TISHCHENKOV, Ivan Antonovich; TSEPLIAYEV,
Vasilii Petrovich; ~~SHIRY, Ivan Semenovich~~; ZHUKOV, A.B., red.;
SHAKHOVA, L.I., red.izd-va; ~~BRATISHKO, L.V.~~ tekhn.red.

[Forestry in Great Britain] Lesnoe khoziaistvo Velikobritanii.
Moskva, Goslesbumizdat, 1957. 53 p. (MIRA 11:1)
(Great Britain--Forests and forestry)

VORONITSYN, K.I., kand. tekhn. nauk, red.; TIZENGAUZEN, P.E., kand. tekhn. nauk, red.; NADBAKH, M.P., red.; TANTSEV, A.A., starshiy nauchnyy sotr., red.; ABRAMOV, S.A., kand. tekhn. nauk, red.; ABRAMOV, D.A., red.; BOGDANOV, N.I., starshiy nauchnyy sotr., red.; VINOGROROV, G.K., kand. tekhn. nauk, red.; GAVRILOV, I.I., starshiy nauchnyy sotr., red.; GUSARCHUK, D.M., starshiy nauchnyy sotr., red.; D'YAKONOV, A.I., red.; ZAV'YALOV, M.A., kand. tekhn. nauk, red.; ZARETSKIY, M.S., starshiy nauchnyy sotr., red.; KACHELKIN, L.I., starshiy nauchnyy sotr., red.; KISHINSKIY, M.I., kand. tekhn. nauk, red.; KOLTUNOV, B.Ya., starshiy nauchnyy sotr., red.; OSIPOV, A.I., kand. tekhn. nauk, red.; SHINEV, I.S., kand. ekon. nauk, red.

[Materials of the enlarged session of the Scientific Council of the Central Scientific Research Institute for Mechanization and Power Engineering in Lumbering on problems concerning power engineering and the electrification of the lumber industry]
Materialy rasshirennoi sessii Uchenogo soveta TSNIME po voprosu energetiki i elektrifikatsii lesnoi promyshlennosti. Moskva, 1961. 75 p. (MIRA 15:4)

(Continued on next card)

VORONITSYN, K.I.---(continued) Card 2.

1. ~~Khimki~~. Tsentral'nyy nauchno-issledovatel'skiy institut mekhanizatsii i energetiki lesnoy promyshlennosti. 2. Nachal'nik Tsentral'nogo byuro tekhnicheskoy informatsii lesnoy promyshlennosti (for Nadbakh). 3. Direktor Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Voronitsyn). 4. Uchenyy sovet Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for D'yakonov). 5. Nachal'nik otdeleniya energetiki i sredstv avtomatizatsii Tsentral'nogo nauchno-issledovatel'skogo instituta mekhanizatsii i energetiki lesnoy promyshlennosti (for Zaretskiy).

(Lumbering)

(Electric power)

SHINEV, I.S., kand.ekonomicheskikh nauk; NAKHMANOVICH, M.B., starshiy
nauchnyy sotrudnik

Efficient administration of forestry and lumbering in the sparsely
wooded regions of the country. Trudy TSNIIM no.32:3-38 '62.
(MIRA 15:5)

(Forests and forestry)

SHINEV, Kh.

"Some new television antennas."

p. 39 (Radio i Televiziia) Vol. 6, no. 12, 1957
Sofia, Bulgaria

SO: Monthly Index of East European Accessions EEAI) LC. Vol. 7, no. 4,
April 1958

SHINEV, Khristo

On a case of the three-wire plane line. Godishnik mash elekt 9:
43-46 '61. [publ. '62]

S/196/62/000/004/003/023
E194/E155

AUTHOR: Shinev, Khristo

TITLE: Determination of the characteristic impedance of a three-conductor plane line

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika no.4, 1962, 12-13, abstract 4 A65. (Godishnik Mash - elektrotekhn. in-t, v.6, no.3, 1959(1960), 199-203 (Bulgarian, summary in German)).

TEXT: A three-conductor line is considered with conductors in a single horizontal plane at the points A, O (centre of the line BC) and D. The method of conformal conversions is used to investigate the region within the rectangle ABCD, it being assumed that the conductors at the points A and D and that at the point O are at potentials of opposite sign. In this case the characteristic impedance may be expressed as follows:

$$Z_c = 120\pi K/K'$$

where K and K' are respectively the complete direct and additional elliptical integrals associated by the relationship Card 1/2

Determination of the characteristic... S/196/62/000/004/003/023
E194/E155

$K/K' = f(k)$. Further simplifying assumptions are made and the modulus k is presented in the form of a series which gives the expression:

$$Z_c = 30 \log \frac{1}{\left(\frac{k}{4}\right)^2 \left[1 + 2 \left(\frac{k}{4}\right)^2 + \dots \right]}$$

When $k \rightarrow 0$, then approximately $Z_c = 60 \log (4/k)$ and when $k \rightarrow 1$,

$$Z_c = \frac{30\pi^2}{\log \frac{8}{1-k}}$$

The above is checked for the conditions $AB = CD = d$ and $OB = OC = h/2$ for two cases: 1) $d \gg h$; and 2) $h \gg 1$. Under these conditions calculations by the method proposed and by the usual method lead to expressions of the same form:

$$1) Z_c = 60 \log (8d/h); \quad 2) Z_c = \frac{30\pi^2}{\log (4h/d)}$$

Card 2/2 [Abstractor's note: Complete translation.]

S/196/62/000/004/004/023
E194/E155

AUTHOR: Shinev, Khristo

TITLE: The characteristic impedance of a three-conductor plane line

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.4, 1962, 13, abstract 4 A66. (Godishnik Mash.-elektrotekhn. in-t, v.6, no.3, 1959(1960), 205-210 (Bulgarian, with summary in German)).

TEXT: Determination of characteristic impedance by the method of conformal conversions often leads to the case of a three-conductor plane line, of which the two outer conductors AB and EF are at the same potential which is opposite in sign to the potential of the centre wire CD. In this case the conversion

$$t = \sqrt{(Z + |Z_A|)(Z - |Z_F|)}$$

gives an image of the system considered (see sketch):

Card 1/2



The characteristic impedance of S/196/62/000/004/004/023
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The origin of coordinates is usually located halfway between points B and C, but may, for example, coincide with the point B. If the points A and Z of the Z region are at infinity it is advisable to use the conversion $t = 1/Z$. If the centre wire is at the same potential as one of the outers it is advisable to use the conversion

$$t = \sqrt{(Z/Z_B)^2 - 1}$$

and then the origin of coordinates should be located halfway between the points B and C. The method can be extended to a large number of conductors. An example is considered which is calculated by means of the conversions $t_1 = Z^2$ and $t_2 = 1/Z$. The results are compared and it is established that they approximately coincide for limiting values of the modulus $k \rightarrow 0$ and $k \rightarrow 1$. 1 lit.ref.

[Abstractor's note: Complete translation.]

Card 2/2

S/035/62/000/002/028/052
A001/A101

AUTHOR: Shinev. Kh.

TITLE: Determination of altitude of satellites

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 2, 1962, 62-69,
abstract 2A579 ("Godishnik Mash-elektrotekhn. in-t", 1959 (1960)
v. 6, no. 3, 211-215, Bulgarian, Russian summary)

TEXT: The altitude of a satellite can be determined from two observations
carried out at different points of the Earth's surface, if Doppler effect is
used and assuming that the motion of the satellite proceeds along a circular
orbit. This method is described. ✓

[Abstracter's note: Complete translation]

Card 1/1

SHINEV, Khr.

Some characteristics of the simple fractional transformation.
Godishnik mash elekt 10 no.1:169-179 '61 (publ. '62.)

PHASE I BOOK EXPLOITATION

BUL/5901

Shinay, Khristo Dimitrov, Candidate of Technical Sciences, Engineer

Anteni (Antennas) 2d rev. and enl. ed. Sofiya, Duzhavao izd-vo "Tekhnika,"
1960. 409 p. Errata slip inserted. 1066 copies printed.

Tech. Ed.: P. Gurov.

PURPOSE: This book is intended for advanced radio engineering students at the
Mashinno-elektrotekhnicheskaya institut (Mechanical-Electrical Engineering
Institute), and specialists in the field.

COVERAGE: The book deals with the origin and development of the theory
of radio antennas, including a simplified mathematical study of long, medium,
short, and ultrashort waves and a description of the advantages offered by each
under various operating conditions. Ch. VII is almost entirely based on
A. Z. Fradin's research (1950-1957) on ultrahigh-frequency antennas. There are
38 references: 34 Soviet (including 2 translations), 3 German, and 1 Czech.

Card 1/1

SHINEV, Christo; FERDINANDOV, Evgen

Theoretical analysis of electromagnetic fields in spiral-
cage antenna. Radiotekhnika i elektronika, no. 9:91-96 '63.
[Moscow, 1963]

The area of the diagram of the spiral cage antenna bearing.
Ibid.:97-98

SHINEVA, P.; TACHEV, P.

Exercise therapy in complex treatment of osteoarticular tuberculosis. Khirurgiia 15 no.2/3:299-302 '62.

1. Iz Detski sanatorium za kostno-stavna tuberkuloza - Varna.
(TUBERCULOSIS OSTEOARTICULAR ther)
(EXERCISE THERAPY)

CHINGAREV, G. A.

CHINGAREV, G. A. -- "INVESTIGATION OF DEVELOPMENT CONDITIONS FOR THE PRODUCTION OF AVIATION FILMS." SUB OF SUB SO, MILITARY RED BANNER ENGINEERING ACADEMY, FRONT V. V. KULIKOV (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES)

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1958

S/196/61/000/012/014/029
E194/E155

AUTHORS: Tsarev, M.I., and Shingarev, M.M.

TITLE: Service experience with gas-pressure relay protection transformers in power systems of the USSR

PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.12, 1961, 13, abstract 12E 81. (Elektr. stantsii, 32.no.7, 1961, 65-67)

TEXT: Gas pressure (or Buchholz) relay protection has advantages over other methods of protecting transformers and forms a good supplement to them; moreover, when a gas-pressure relay is used to disconnect the transformer the differential and other current protective arrangements of the transformer need not be so sensitive. In recent years the opinion has been expressed that gas-pressure relays are insufficiently reliable and so operate falsely. The VNIIE has made an analysis of the operation over the last eight years of gas-pressure relays arranged to disconnect transformers. Since the number of of correct operation of the relays depends to a considerable

Card 1/2

Service experience with gas-pressure.. S/196/61/000/012/014/029
E194/E155

extent upon the occurrence of damage to the equipment protected, the reliability and quality of the protection is best assessed by the frequency of incorrect operation, i.e. by the average number of years for which a single relay serves before operating falsely. Allowance should also be made for the frequency of correct operations. Over an eight-year period the occurrence of incorrect operation of gas-pressure relays was once in 124 years. This is better than corresponding data for previous years. The overwhelming majority of cases of incorrect operation of gas-pressure relays were due to defects of erection or to service deficiencies. The analysis indicates that there is no justification for widespread use of gas-pressure relays simply as alarm signals. However, it may sometimes be necessary, for a short or long period, to arrange for the relay only to give a signal when it is known in advance that it may operate falsely (in transformers with forced cooling, or in those operating near blasting operations, etc.).

[Abstractor's note: Complete translation.]

Card 2/2

KIVKIN, S. L.; YEGOROV, B. N.; SHUMAKOV, M. R.

"Experimental investigation of the heat capacity of ethyl alcohol and its solutions in water in the supercritical region."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

V. N. Dzerzhinskii All-Union Heat Engineering Inst.

SHINGAREV, M.S.

Use of microelements and growth promoting substances in pine
nurseries. Bot.; issl. Bel. otd. VBO no.5:216-218 '63.
(MIRA 17:5)

SHINGAREV, R. V.

23156 Nomogramma dlya opredeleniya poter' tepla. Tekstil. prom-st',
1949, No. 6, c. 37-38.

SO: LETOPIS' NO. 31, 1949

SHINGAREV, N. V.

SHINGAREV, N. V. -- "EXPERIMENTAL INVESTIGATION OF THE HEAT CONDUCTIVITY OF STEEL IN NATURAL GAS AND CARBON DIOXIDE." 20-21 MAY 58, ALL-UNION SCHOOL OF ENGINEERING HEAT ENGINEERING SCI RES INST (INST F. E. DZERZHINSKY (DISSERTATION FOR THE DEGREE OF CANDIDATE IN TECHNICAL SCIENCES))

SO: VECHERNAYA MOSKVA, JANUARY-DECEMBER 1958

SHINGAREV, R. V.

USSR/Chemical Technology. Chemical Products and Their I-14
Application--Treatment of natural gases and
petroleum. Motor fuels. Lubricants.

Abstr Jour: Ref Zhur-Khimiya, No 3, 1957, 3335

Author : Shingarev, R. V.
Inst : Ivanovsk Textile Institute
Title : Thermal Conductivity of Natural Gas

Orig Pub: Sb. nauch.-issled. rabot Ivanovsk. tekstil'n.
in-ta, 1955, No 7, 108-117

Abstract: The results from the determination of the thermal conductivity of natural gas from the Saratov field in the pressure range 1-146 atm at temperatures from -178 to 100° are presented. The determinations were carried out by the heated-wire method. It is shown that the tabulated data, curves, and equations giving the thermal conductivity obtained during the investigation can be extended to natural gases of other compositions containing over 90% CH₄.

Card 1/1

Shingarev, R. V.
USSR/Atomic and Molecular Physics - Heat, D-4

Abst Journal: Referat Zhur - Fizika, No 12, 1956, 3406

Author: Shingarev, R. V.

Institution: None

Title: On the Problem of Convective Heat Exchange in Narrow Cylindrical Gaps

Original Periodical: Sb. nauch.-issled. rabot [Coll. of Research Works] Ivanovsk.
tekstil'n. in-t., 1955, No 7, 137-141

Abstract: An experimental study of the phenomenon of heat exchange during natural convection in narrow cylindrical slits, on the order of 0.4 mm wide, filled with methane (Saratov gas) and with carbon dioxide, so as to refine the method of determining the coefficient of heat conductivity of liquids and gases under pressure. It is established that for Rayleigh numbers $Gr \cdot Pr \leq 2,500$, the convection hardly affects the process of heat conduction in narrow slits. For the regions $Gr \cdot Pr > 2,500$, the laws determined for the convective heat exchange differ from the laws given in the literature for wide slits. For narrow slits the coefficient of convection becomes considerably smaller than for wide ones.

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- 1 -

KOROLEV, V.M., SHINGAREV, R.V., VATAGIN, Yu.M.

Conversion of sizing machines to gas. Izv. vys. ucheb. zav.; tekhn.
tekst.prom. no.3:86-91 '60. (MIRA 13:7)

1. Ivanovskiy tekstil'nyy institut im. M. V. Frunze.
(Sizing (Textile)) (Textile machinery)

GARIN, I.I., inzh.; GERDZHOY, M.Ya., inzh.; SHINGAREVA, P.I., inzh.

Oxygen cutting of metals using a propane-butane mixture as fuel
gas. Energ. stroi. no.1:121-123 '59. (MIRA 13:2)

1. Trest "Volgoenergomontash".
(Gas welding and cutting)

SHINGARKIN, S.M.

Use of apomorphine in heightened resistance to antabuse.
Zdrav.Kazakh. 17 no.8:35-36 '57. (MIRA 12:6)

1. Iz Ural'skoy oblastnoy bol'nitsy.
(DISULFIDE--THERAPEUTIC USE) (ALCOHOLISM) (APOMORPHINE)

LAVRENT'YEVA, V.A.; RQY, V.A.; TOLSTOV, V.N.; FOKINA, V.I.; SHINGARKIN, S.M.

New advances in the treatment of multiple sclerosis, preliminary
report. Zdrav. Kazakh. 21 no. 4:42-44 '61. (MIRA 14:4)

1. Iz Ural'skoy oblastnoy bol'nitsy.
(MULTIPLE SCLEROSIS)

SHINGURCVA, A. F.

Medicine, Industrial

Results of dispensary work of the plant physician. Sov,zdrav., 11, No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. Unclassified.

"APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549510017-8

be determined from existing data often not available, or by computer-aided experiments. Textbooks of automatic regulation theory

APPROVED FOR RELEASE: 08/23/2000

CIA-RDP86-00513R001549510017-8"

SHINIBEROV, L.P.
AUTHOR: SHINIBEROV, L.P., cand.tech.sc. (Leningrad) 105-8-5/20
TITLE: An Electric Device as the Controlled Object. (Elektrogidro-
prived kak ob'yekt regulirovaniya, Russian)
PERIODICAL: Elektrichestvo, 1957, Nr 8, pp 27 - 31 (U.S.S.R.)

ABSTRACT: An exact calculation is given here of the regulating equipment, namely of an electrohydraulic drive. Seven equations are derived which are transmission functions for the electrohydraulic drive as a whole. They make it possible to evaluate the dynamic properties of the electrohydraulic drive, as the regulating equipment, and they make it possible to approach the calculation of the entire control system with a much greater foundation. In order to prove that, experiments were performed which are described here. Three cases are investigated and it is shown that in all those cases the derived equations can be used in the calculation of the motions of the electrohydraulic drive in transition processes. (6 illustrations and 3 Slavic references)

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED: 1.12.1956.
AVAILABLE: Library of Congress

Card 1/1

SHINIBEROV, L.P.

Model of an electric drive. Nauch.dokl.vys.shkoly: elektromekh. 1
avtom. no.1:80-88 '59. (MIRA 12:11)

1. Rekomendovana Leningradskim mekhanicheskim institutom.
(Electric driving)

67471

~~20~~ 16.9500

SOV/146-2-4-13/19

AUTHOR: Shiniberov, L.P., Candidate of Technical Sciences

TITLE: The Calculation of Follow-Up Systems⁴ for a Vector Plotter

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye. 1959, Nr 4, pp 97-105 (USSR)

ABSTRACT: This is a mathematical investigation of two follow-up systems used for the automatic plotting of the vector by means of its two components (Figure 1) on a mechanical and electro-mechanical sine-cosine plotter (Figure 3, block diagram). There are two methods of connecting the motors with the sensitive elements of the two systems: by means of the quadrant switch, and by means of the "SKVT" working in the plotter circuit (Figure 2). In order to raise the accuracy of the plotter, the interaction of the tracking systems should be reduced by computing two equal follow-up

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SOV/146-2-4-13/19

The Calculation of Follow-Up Systems for a Vector Plotter

systems with respect to the amplification coefficient as well as time constants, and by introducing differentiating connections into the interior of the follow-up systems as well as their intersecting systems. This article was recommended by the Kafedra Nr 12 (Chair Nr 12).

There are 2 diagrams, 1 set of diagrams, and 3 Soviet references.

ASSOCIATION: Leningradskiy ordena Krasnogo Znameni voyenno-mekhanicheskoy institut (The Leningrad Red-Banner Military Mechanical Institute). ✓

SUBMITTED: 2 February 1959

Card 2/2

16.9500

73173
SOV/103-21-3-19/21

AUTHOR: Shiniberov, L. P. (Leningrad)

TITLE: Determination of the Interval of Positive Values of the Real Part of the Frequency Characteristic Using a Graphical Representation of the Transient Response Function

PERIODICAL: Avtomatika i telemekhanika, 1960, Vol 21, Nr 3, pp 480-481 (USSR)

ABSTRACT: The paper suggests a graphical method for determination of the border frequency ω_p of the positive part of the real part of frequency characteristic $R(\omega)$ when the curve $\alpha_2 = f(t)$, representing the transient process of a closed loop automatic control system, is as shown on Fig. 1. On Fig. 1 the straight line DE parallel to the t axis is drawn through the maximum point on the curve. The straight line AB is then drawn in such a manner that it coincides with the greatest possible portion of the rising part of curve $\alpha_2 = f(t)$.

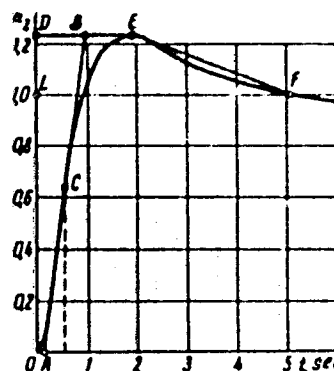
Card 1/5

Determination of the Interval of Positive Values of the Real Part of the Frequency Characteristic Using a Graphical Representation of the Transient Response Function

78173

SOV/103-21-3-19/21

Fig. 1. Determination of ω_p using the graphic representation of the transient response function.



The point C in the middle of line AB corresponds to the point t_c on the abscissa axis. The border frequency

ω_p is then

Card 2/5

Determination of the Interval of Positive
Values of the Real Part of the Frequency
Characteristic Using a Graphical
Representation of the Transient Response
Function

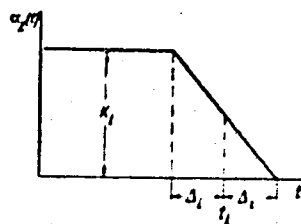
78173
307/103-21-3-19/41

$$\sigma_p = \frac{\pi}{2t_c}$$

(1)

The mathematical demonstration of the above construction
is based on a representation of the trapezoidal tran-
sient response functions illustrated on Fig. 2.

Fig. 2. Typical trapezoidal
transient response function.



Card 3/5

Determination of the Interval of Positive
Values of the Real Part of the Frequency
Characteristic Using a Graphical
Representation of the Transient Response
Function

73173

SOV/103-31-2-10/81

For the function shown on Fig. 1, $R(\omega)$ may be
written as

$$R(\omega) = \sum_{i=1}^2 \left[K_i - \omega K_i t_i \left(\frac{\cos t_i \omega}{t_i \omega} \right) \left(\frac{\sin \Delta_i \omega}{\Delta_i \omega} \right) \right] + 1. \quad (2)$$

Here $K_{i=1} = DL$ is the height of the positive trapezoid DEFL, and $K_{i=2} = -OD$ is the height of the negative trapezoid DBAO. For $\omega = \omega_p$ Eq. (2) must equal zero. It is shown that Eq. (2) may be transformed into Eq. (3).

$$R(\omega) = -\omega K_2 t_2 \left(\frac{\cos t_2 \omega}{t_2 \omega} \right) \left(\frac{\sin \Delta_2 \omega}{\Delta_2 \omega} \right). \quad (3)$$

Card 4/5